

**COUNCIL FOR SCHOOL PERFORMANCE**

**QUALITY OF GEORGIA'S PRE-KINDERGARTEN PROGRAM**  
**1997-98 SCHOOL YEAR**



**PREPARED BY**

**Kris Byran**  
**Gary T. Henry**

**SUBMITTED BY**

**Buford Arnold**  
**Dorothy Cottom**  
**Melvin Kruger**

**Pat Willis, Chairman**

**Jeanie Weathersby, Director**  
**Gary T. Henry, Research Director**

**Leena Johnson**  
**Dean Swanson**  
**Linda Schrenko, Ex officio**

# Quality of Georgia's Prekindergarten Program 1997-1998 School Year



---

October 1998

Atlanta, Georgia

## ***Summary of Major Findings***

During the 1996-97 and 1997-98 school years, the Council for School Performance and the Applied Research Center of Georgia State University conducted an evaluation of the lottery-funded Georgia Prekindergarten Program. Using data collected through classroom site visits and surveys of teachers in those classrooms, this evaluation compares the quality of classrooms from one year to the next, looks at the relationship between teachers' beliefs and classroom quality, and provides information about the Georgia Prekindergarten Program's teachers and their classrooms.

### **Do Georgia Pre-K classes meet basic conditions for providing a safe, healthy and stimulating environment?**

Methods of judging the quality of early childhood care classrooms include ratings of the environment, adequacy of the equipment and facilities, and teachers' adherence to developmentally appropriate practices. Overall, Georgia Prekindergarten Program classes have adequate materials and supplies, are led by well-trained teachers who are knowledgeable of developmentally appropriate practice, and provide a variety of experiences to the state's four year-olds to promote their healthy development.

### **Has the quality of the classrooms improved over time?**

An important indicator of quality is the variety of experiences available in the classroom. In both the 1996-97 and the 1997-98 school years, researchers found that prekindergarten classrooms had many different types of activities available to children. Most classrooms had learning centers for art activities, home living (which usually consists of a play stove, sink, refrigerator, and food), manipulatives (usually small toys that develop fine motor and reasoning skills, e.g., sorting toys, links, Lego's), puzzles, blocks, music, and reading. Many also had areas for dramatic play and dress-up, listening (audio equipment), and science activities (e.g., magnifying glasses, magnets, and plants). For the most part, the variety and number of learning experiences available to prekindergarten children remained the same from the 1997-96 school year to the 1997-98 school year. On one of the observation instruments used, classrooms received an average score of 66 out of 78 possible points in the 1996-97 school year. The average score the next year was slightly higher, with the average classroom receiving 67 out of 78 possible points. However, the percentage of classrooms with a computer rose considerably from the 1996-97 school year to the 1997-98 school year, from 50% to 66% of classrooms.

**Are Pre-K classrooms meeting rigorous standards for promoting early childhood development?**

As compared to results from other national and state studies that used the same rating scale, Georgia prekindergarten classrooms are of higher quality than preschool classrooms in other states. During the 1997-98 school year, Pre-K classes were rated using a rigorous instrument that has been used in many national studies of preschool and assesses overall quality of early childhood settings. All classrooms met the “minimum” standard of quality, and none were found to be inadequate. Nearly one-quarter of the classrooms (23%) were rated good to excellent in quality. About half of the classrooms (49%) scored just below the “good” standard, and minor improvements would likely enable these classrooms to meet the “good” standard.

While slight differences exist, the Council for School Performance found that there was not a significant difference in the quality of prekindergarten classrooms by region of the state, curriculum, or organization type (i.e., public; private, not-for-profit; and private, for-profit).

**Do the prekindergarten teachers recognize the importance of developmentally appropriate practice?**

Most teachers know what is developmentally appropriate for prekindergartners, as indicated by results from the Developmentally Appropriate Practices survey. The mean Teacher Developmental Appropriateness score for prekindergarten teachers in this study was 3.96, with a range of 3.10 to 4.84. (The survey has a possible range of 1 to 5, where 5 indicates developmentally appropriate and 1 indicates developmentally inappropriate.)

At least 98% of prekindergarten teachers in this study believed that prekindergarten teachers should provide many open-ended experiences for children, use manipulative materials to teach math, allow children to play with blocks, let children solve problems on their own, and read stories to the class everyday. Most teachers also believed that prekindergarten teachers should expose children to the language and values of other cultures, have a daily music activity, and present educational activities as games.

**What credentials and education do the prekindergarten teachers have?**

In the 1997-98 school year, 84% of prekindergarten teachers had at least a four-year college degree. When asked about their highest level of education, most (48%) said they had earned a bachelor's degree, 20% had taken some graduate level classes, and nearly 16% had earned a graduate degree. Of those with at least a college degree, most had earned their degree in early childhood education.

Seventy-two percent of the 1997-98 teachers in the study had teacher certificates. Nine percent had been trained as a Montessori teacher or had received a vocational diploma in child care. Seven percent had earned a Child Development Associate or Child Care Professional certification.

**Is teacher turnover an issue for the Georgia Prekindergarten Program?**

Only 55% of the classrooms had the same prekindergarten teachers as last year, indicating a high turnover rate – 45% – among prekindergarten teachers. National studies have found similarly high turnover rates among child care teaching staff. Finding and keeping quality teachers is a significant problem facing preschool programs, including the Georgia Prekindergarten Program.

A previous study found that “the most important determinant of staff turnover, among the adult work environment variables, was staff wages” (Whitebook et al. 1989, 4). And the Council study produced similar results: Teachers who remained in their jobs were more likely to have felt that their salaries were fair (85%) than were those that left (49%). Teachers of prekindergarten classes run by local school systems were more likely to stay in their positions from the 1996-97 to 1997-98 school years and were much less likely to feel that they were paid unfair salaries, than were teachers in prekindergarten classes not run by school systems.

### ***Introduction***

Over the past two decades, policymakers have increasingly become interested in prekindergarten programs. Statewide prekindergarten initiatives have grown significantly. Spurred by public outcry about a crisis in education, states are turning their attention to the early years, in the hope that children will be better prepared for school. State investment in early care services necessitates the evaluation of the effectiveness. This is especially important in light of research findings that quality matters. This evaluation is one step in assessing and improving the quality and effectiveness of Georgia's investment.

This study assessed the quality of a sample of Georgia Prekindergarten Program classrooms in the 1996-97 and the 1997-98 school years. The sample consisted of 100 classrooms, approximately half of those chosen for the 1996-97 study. In the 1997-98 school year, each classroom was observed for approximately three hours, during which time the observer completed the Early Childhood Environment Rating Scale (ECERS) and the Observation Checklist. The ECERS instrument has been widely used in early childhood care research and provides a rigorous assessment of early childhood programs. In addition, teachers from these classrooms were given written surveys asking about their beliefs and practices. During the 1996-97 school year, researchers also conducted classroom observations and administered two telephone surveys to teachers (in addition to many other sources of data that were obtained for future use in a longitudinal study of 1996-97 prekindergarten participants).

The purpose of the evaluation is to assess the quality of services currently provided, to compare the quality of classrooms from one year to the next, to look at the relationship between teachers' beliefs and classroom quality, and to provide information about the Georgia Prekindergarten Program – its teachers and their classrooms. The study uses data collected through site visits in prekindergarten classrooms and surveys of teachers in those classrooms.

In the 1996-97 school year, a research team from the Applied Research Center conducted site visits at 211 randomly-selected classrooms from across the state and conducted surveys with the prekindergarten teachers who taught in these classrooms. In the 1997-98 school year, a research team visited about half (100) of these classrooms during a three-month period between March and June 1998. In early May, surveys on teachers' beliefs and practices were sent to teachers in each of the classrooms. Follow-up phone calls were made to teachers about the survey and the survey was re-sent to teachers who requested another copy. Of the 100 teachers sent surveys, 80 completed and returned them, resulting in an 80% response rate. Further data on teacher training and education were obtained from the Office of School Readiness, the state agency that oversees the Georgia Prekindergarten Program. In three classrooms, the teacher who filled out the survey was not the teacher of the classroom at the time of the observation. For further details about the methodology of the study, see the appendix of this report.

## ***Background***

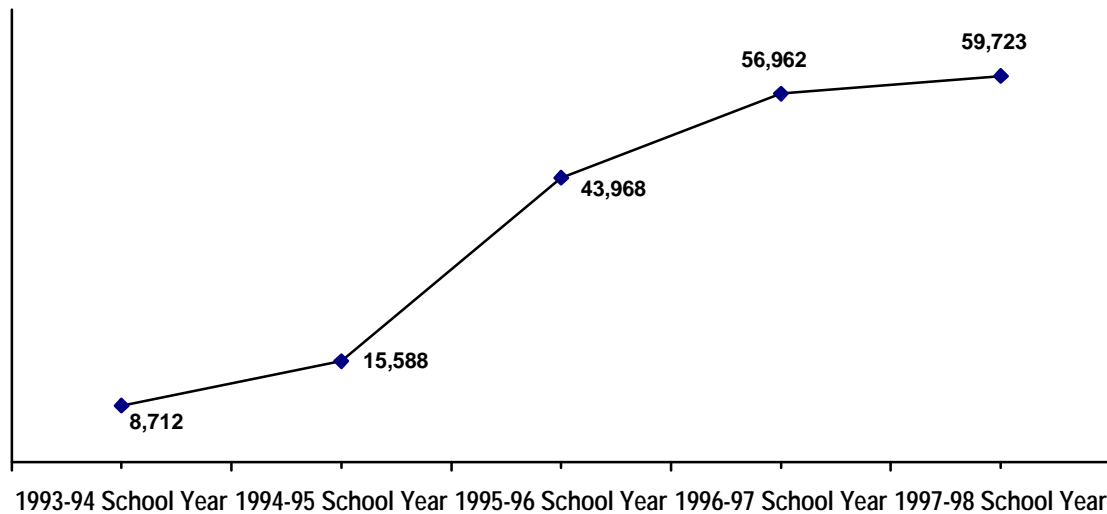
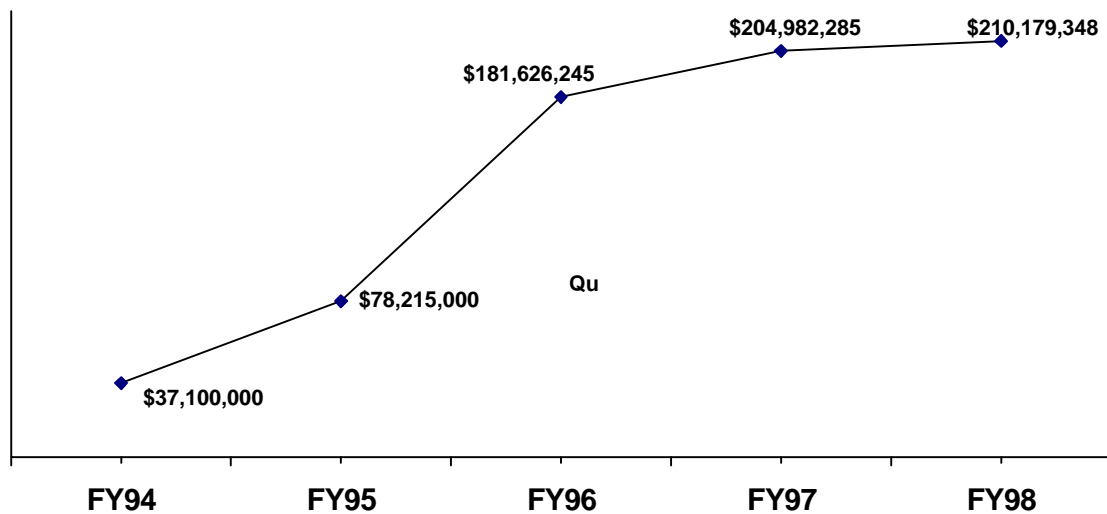
Labor market trends dictate and recent research supports the importance of providing high quality child care experiences for children. “According to the Bureau of Labor Statistics, only 13% of families fit the traditional model of husband as wage-earner and wife as homemaker” (U.S. Department of Labor, 1997). Nearly seven out of 10 mothers whose children are under age six work outside the home (U.S. Department of Labor, 1997). And a recent study found that nearly half of employed mothers and one-third of unemployed mothers of preschool-age children used center-based care as their primary child care arrangement (Willer et al., 1991).

As out-of-home care has become an increasingly common experience for young children, researchers have focused their efforts on studying the consequences.

In sum, global assessments of [child care] quality have confirmed the common sense knowledge that better child care is better for children. This conclusion is not insignificant, however, in light of the telling qualification it places on questions of *whether* child care is detrimental, neutral, or beneficial for children’s development (Philips and Howes, 1987).

Child development experts have continued to uncover the benefits of high quality preschool, especially for low income children, and the negative outcomes associated with poor quality care (e.g., Cost, Quality & Child Outcomes Team, 1995; and for reviews of the literature, see Phillips and Howes, 1993; Phillips, 1987).

Georgia’s major response to these developments has been the founding of universal prekindergarten. In 1993, the Georgia Prekindergarten Program was established for Georgia’s four-year olds, funded by proceeds from the Georgia Lottery for Education. The goal of the program is to provide the state’s four-year olds with the learning experiences needed to be prepared for kindergarten. The program initially targeted at-risk children. (Figure 1 shows the number of children served by the Georgia Prekindergarten Program by school year.) The program expanded its reach to serve all four-year olds regardless of family income. It now serves a higher proportion of the four-year olds than does any other similar program in the nation. The program has grown substantially since its humble beginnings as a pilot program with 20 sites and recently received a national Innovation in American Government Award from the Ford Foundation and Harvard University. In 1993, it was piloted with \$2.9 million and served 750 children. In the 1997-98 school year, the program was allocated \$210 million in lottery funds and served nearly 60,000 children. Figure 2 shows the amount of lottery proceeds allocated to the Georgia Prekindergarten Program by fiscal year.

**Figure 1. Children Served by Prekindergarten by School Year****Figure 2. Allocations for Prekindergarten by Fiscal Year**

The six and one-half hour per day, five day program operates on the regular school system calendar and is free to four-year old children whose parents are Georgia residents. The classrooms are in a variety of settings, including child care centers, public schools, churches and community organizations. Government agencies, such as school systems; private, not-for-profit organizations; and private, for-profit organizations are eligible for funding. The Office of School Readiness has established a maximum child to staff ratio of 10:1, with no more than 20 children in a classroom, supervised by a lead teacher and an assistant teacher.

Other evaluations of the Georgia Prekindergarten Program have resulted in many positive findings. Findings from year one of a longitudinal study of prekindergarten participants found that most classrooms were fully equipped, providing many diverse experiences for children.

Most teachers were very satisfied with their students, and parents were overwhelmingly pleased with the program, according to the Applied Research Center study (Basile, Henderson, and Henry, 1997). An evaluation by Georgia State University's College of Education found that children who attended prekindergarten received higher academic and social ratings by their kindergarten teachers. These children also had better attendance than did those kindergarteners who had not attended preschool programs (Pilcher and Kaufman-McMurrain, 1996). A 1996 survey of parents whose children participated in the Pre-K program found that parents overwhelmingly gave the program high marks in terms of quality and effectiveness. The parents believed that their children were learning new skills and getting a head start on kindergarten, according to the Council for School Performance survey (Basile and Henry, 1996).

The evaluation described in this report builds on previous research about the Georgia Prekindergarten Program. It takes data collected from the 1996-97 school year on classroom materials, equipment and layout, and adds a more complex and rigorous measurement of classroom quality. In this evaluation, the concept of quality includes such factors as teacher-child interactions, provisions for staff and parents, the daily schedule, and much more. The use of several instruments in both school years allows for comparison over time – to determine if prekindergarten classrooms have improved, stayed the same, or decreased in quality. Furthermore, the relationship between these different measurements provides a detailed look at the Georgia Prekindergarten Program's teachers and classrooms.

### ***Quality of Prekindergarten Classrooms***

#### ***Overall Quality of Prekindergarten Classrooms***

To assess the overall quality of prekindergarten classrooms, the research team used two observation instruments, the Early Childhood Environment Rating Scale (ECERS) and the Observation Checklist. The ECERS “gives an overall picture of the surroundings that have been created for the children and adults who share an early childhood setting” (Harms and Clifford, 1980, 1). This ‘picture’ includes such aspects as the schedule, equipment and supplies, teacher-child interactions, and activities. The instrument has 37 items on a 7-point scale, with 1 being “inadequate”, 3 being “minimal”, 5 being “good” and 7 being “excellent”. The Observation Checklist is an inventory of equipment and learning centers in the classroom, which focuses on the layout of the classroom. Further descriptions of both instruments are contained in the methodology section of this report. Each classroom in the study was observed for approximately three hours, and the researcher completed the observation instruments.

Researchers used the Observation Checklist when conducting their site visits in both the 1996-97 and the 1997-98 school years, allowing for comparisons of the prekindergarten classrooms over time. In the 1996-97 school year, prekindergarten classrooms had an average score of 66 out of a possible 78 points. The following school year, these classrooms had a slightly higher average score, 67 out of 78 points. This difference in average scores is not a statistically significant difference. This is not surprising since we would expect that the scores from the Observation Checklist would be very similar from one year to the next, even when a different teacher is in the classroom. Since the checklist focuses on classroom layout, supplies and equipment, several forces would probably prohibit large differences in classrooms from one year to the next. For example, additional equipment would require a significant investment. Furthermore, classroom layout is often constrained by the shape and size of the room and the location of non-movable features, such as doors and windows.



While the overall average score remained the same, there were some differences for individual items on the observation checklist in areas such as classroom layout, learning centers, and outdoor play area. Table 1 compares the layout of prekindergarten classrooms from one year to the next. Italics indicate that the difference from one year to the next is significantly different. These prekindergarten classrooms showed the most improvement in having storage and display areas for children's work. Two areas of concern are barriers to emergency exits and other exits and storage for teachers' belongings. For both of these items, fewer prekindergarten classrooms satisfied these standards in the 1997-98 school year than in the 1996-97 school year.

**Table 1. Classroom Layout**

|  | <b>1996-97</b> | <b>1997-98</b> |
|--|----------------|----------------|
| Children have access to available materials                                  | 100%           | 98%            |
| Children can use most equipment/materials with a minimum of adult assistance | 100%           | 97%            |
| Equipment/materials can be easily moved when necessary                       | 99%            | 95%            |
| Room has some natural lighting   | 97%            | 98%            |
| <i>Emergency and other exits are clear of barriers</i>                       | <i>96%</i>     | <i>87%</i>     |
| Areas have adequate artificial lighting                                      | 95%            | 98%            |
| Centers have adequate space for several children                             | 94%            | 94%            |
| <i>Teacher/care giver supplies are out of children's reach</i>               | <i>94%</i>     | <i>60%</i>     |
| Space is available for individual, small group, and large group activities   | 94%            | 99%            |
| Play/activity areas are near essential supplies (e.g. water, books)          | 90%            | 95%            |
| Teacher's views of children are free of physical barriers                    | 88%            | 82%            |
| Multi-cultural pictures, dolls, and/or books are present                     | 84%            | 90%            |
| Children can play in centers with a minimum of interference                  | 83%            | 90%            |
| <i>Areas to store, display children's work are convenient</i>                | <i>81%</i>     | <i>92%</i>     |
| Children's work is displayed at eye level                                    | 80%            | 75%            |
| Children have privacy if desired   | 78%            | 68%            |
| Storage areas are clearly identified and labeled                             | 77%            | 78%            |
| Quiet and noisy areas are separated  | 66%            | 73%            |

In both school years, researchers found that prekindergarten classrooms had many different types of activities available to children. Typically, early childhood classrooms are comprised of different learning centers, which are areas set aside for a particular kind of activity. Most classrooms have centers for art activities, home living (which usually consists of a play stove, sink, refrigerator, and food), manipulatives (usually small toys that develop fine motor and reasoning skills, e.g., sorting toys, links, Lego's), puzzles, blocks, music, and reading. Many also have areas for dramatic play and dress-up, listening (audio equipment), and science activities (e.g., magnifying glasses, magnets, plants). Table 2 shows the percentage of prekindergarten classrooms with different learning centers. Italics indicate that the difference from one year to the next is statistically significant.

**Table 2. Learning Centers Available in Prekindergarten Classrooms**

|                            | <b>1996-97</b> | <b>1997-98</b> |
|----------------------------|----------------|----------------|
| Art                        | 98%            | 100%           |
| Home living                | 99%            | 100%           |
| Manipulatives              | 100%           | 99%            |
| Puzzles                    | 98%            | 99%            |
| Blocks                     | 98%            | 98%            |
| Large group gathering area | 99%            | 97%            |
| <i>Music</i>               | 87%            | 96%            |
| Reading/quiet area         | 96%            | 94%            |
| Dramatic play              | 89%            | 91%            |
| <i>Listening</i>           | 85%            | 76%            |
| Science                    | 80%            | 76%            |
| <i>Computer</i>            | 50%            | 66%            |
| <i>Writing</i>             | 88%            | 65%            |

The percentage of classrooms with a computer rose considerably from the 1996-97 school year to the 1997-98 school year, from 50% to 66% of classrooms. In another one-tenth of classrooms, a computer was available for the children even though it was not located in the classroom. Likewise, more classrooms in the 1997-98 school year had a music center, usually with instruments, a record, CD, or tape player, and recorded music. However, the percentage of classrooms with listening centers and writing centers dropped in the 1997-98 school year.

Since gross motor activities, activities using the large muscle groups, are essential to a child's healthy development, we looked at the outdoor play area for these prekindergarten classrooms. In the 1996-97 school year, all but one classroom had an outdoor play area available; however, the following year, all classrooms had an outdoor play area available. In both years, most of these playgrounds had a variety of equipment appropriate for four-year olds. Table 3 compares the outdoor play area for both school years. Italics indicate that the difference from one year to the next is statistically significant.

**Table 3. Outdoor Play Areas of Prekindergarten Classrooms**

|                                | <b>1996-97</b> | <b>1997-98</b> |
|--------------------------------|----------------|----------------|
| Appropriate for four-year olds | 88%            | 95%            |
| Safe                           | 88%            | 94%            |
| Fenced in                      | 76%            | 81%            |
| Close to pre-k classroom       | 78%            | 87%            |
| <i>Variety of equipment</i>    | 71%            | 82%            |
| <i>Equipment is permanent</i>  | 85%            | 94%            |

On a scale from 1 to 10, with 1 being "unsatisfactory" and 10 being "outstanding", the average rating for the outdoor play area was a 7 in both years.

In addition to using the Observation Checklist, researchers completed the Early Childhood Environment Rating Scale during their site visits. The ECERS, which consists of 37 items on a

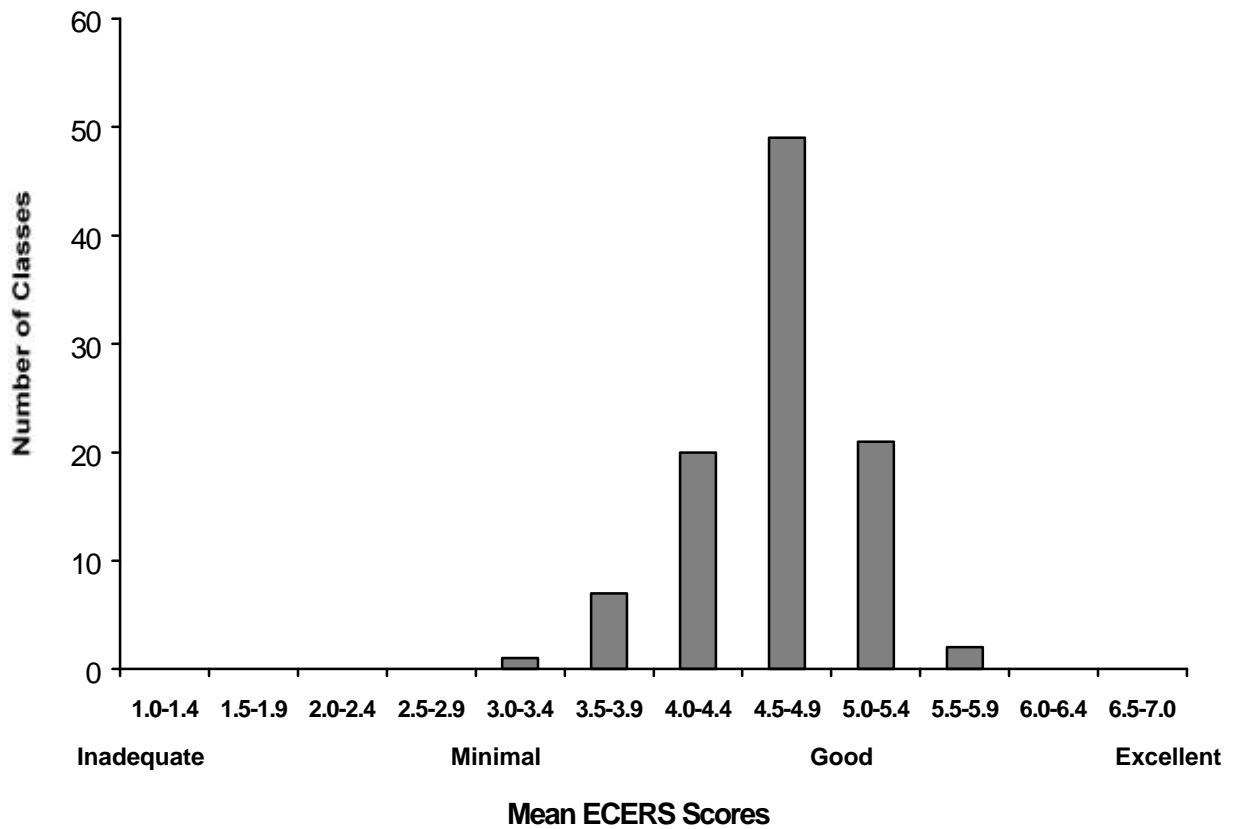
seven-point scale, is a more rigorous and complex measure of the quality of an early childhood care setting. To quantify the level of quality in each classroom, 32 of the 37 items on the ECERS were averaged to create a mean ECERS score<sup>1</sup>. The mean ECERS score could range from 1 to 7, with 1 being “inadequate”, 3 being “minimal”, 5 being “good” and 7 being “excellent”. Many studies have documented that higher scores on the instrument are associated with better child outcomes (e.g., Whitebook et al., 1989; Cost, Quality & Child Outcomes Team, 1995).

The average classroom had a score of 4.66, which is just below the good standard (mean score of 5.0). The lowest score of a classroom in the study was a 3.41, which meets the minimum standard of quality. The highest was a 5.81, which is between the good and excellent standards of quality.

All classrooms met the “minimum” standard of quality, and none were found to be inadequate. Nearly one-quarter of the classrooms (23%) were rated good to excellent in quality. About half of the classrooms (49%) scored just below the “good” standard, where slight improvements would likely enable these classrooms to meet the “good” standard. The remaining 28% of classrooms scored below a 4.5 on the rating scale. Figure 3 shows the distribution of mean ECERS scores for the 100 classrooms in the study.

---

<sup>1</sup> One of the items (Exceptional Provisions) had 10% or more cases missing and was excluded from the computation of the mean ECERS score. In addition, the items in the Adult Needs subscale were excluded to be consistent with the computation of the mean in other studies.

**Figure 3. Distribution of Mean ECERS Scores for Prekindergarten Classrooms (n=100)**

The quality of Georgia's prekindergarten classrooms is better than that of preschool classrooms in general. A comparison of mean ECERS scores between other samples of preschool classrooms and Georgia's prekindergarten classrooms shows that Georgia's prekindergarten classrooms have a higher mean ECERS score. The mean ECERS score for the Georgia Pre-K sample was 4.66, as compared to 4.03 for a sample of 120 center-based preschool classrooms in three states (Scarr, Eisenberg, and Deater-Deckard, 1994), 4.25 for 150 center-based preschool classrooms in Florida (Howes and Smith, 1995), and 4.24 for 32 Head Start classrooms (Bryant, Burchinal, Lau, and Sparling, 1994).

As mentioned previously, the mean ECERS scores are comprised of 32 out of a possible 37 items that make up the Early Childhood Environment Rating Scale. The mean scores for all classrooms in the study for each of the 37 items are contained in Table 4. Items are listed under the subscale to which they belong, e.g., Personal Care, Furnishings.

**Table 4. Mean Scores on ECERS Items<sup>2</sup>**

| <b>Item</b>                   | <b>Mean</b> | <b>SD</b>  | <b>Range</b>     |
|-------------------------------|-------------|------------|------------------|
| Personal Care                 |             |            |                  |
| Greeting/departing            | 4.73        | 1.52       | 1-7              |
| Meals and snacks              | 4.22        | 1.12       | 2-7              |
| Nap/rest                      | 5.49        | 1.28       | 1-7              |
| Diapering/toileting           | 3.06        | 2.28       | 1-7              |
| Personal grooming             | 4.18        | .89        | 3-7              |
| Furnishings                   |             |            |                  |
| Routine furnishings           | 5.38        | 1.46       | 1-7              |
| Learning furnishings          | 4.02        | 1.00       | 1-7              |
| Relaxation furnishings        | 5.08        | 1.36       | 2-7              |
| Room arrangement              | 4.75        | 1.19       | 3-7              |
| Child-related display         | 4.46        | 1.10       | 2-7              |
| Language Reasoning            |             |            |                  |
| Understanding language        | 5.31        | 1.01       | 1-7              |
| Using language                | 5.23        | 1.07       | 3-7              |
| Reasoning                     | 4.73        | 1.30       | 2-7              |
| Informal language             | 4.21        | 1.34       | 1-7              |
| Fine and gross motor          |             |            |                  |
| Perceptual/fine motor         | 5.67        | 1.13       | 3-7              |
| Fine motor supervision        | 4.92        | .92        | 2-7              |
| Gross motor space             | 4.53        | 1.12       | 2-7              |
| Gross motor equipment         | 4.08        | .96        | 1-6              |
| Gross motor time              | 4.75        | 1.10       | 3-7              |
| Gross motor supervision       | 5.19        | .95        | 3-7              |
| Creative activities           |             |            |                  |
| Art                           | 4.56        | 1.32       | 1-7              |
| Music/movement                | 5.35        | 1.05       | 3-7              |
| Blocks                        | 4.34        | 1.33       | 1-7              |
| Sand/water                    | 3.98        | 1.51       | 1-7              |
| Dramatic play                 | 3.49        | .76        | 1-5              |
| Creative schedule             | 5.34        | .84        | 3-7              |
| Creative supervision          | 5.68        | 1.11       | 3-7              |
| Social development            |             |            |                  |
| Space to be alone             | 3.69        | 1.28       | 1-7              |
| Free play                     | 4.93        | 1.31       | 1-7              |
| Group time                    | 5.18        | 1.26       | 1-7              |
| Cultural awareness            | 3.63        | 1.00       | 1-7              |
| Tone                          | 5.07        | 1.15       | 3-7              |
| <i>Exceptional provisions</i> | 3.97        | 1.65       | 1-7              |
| Adult needs                   |             |            |                  |
| <i>Adult personal area</i>    | 3.73        | 1.41       | 1-7              |
| <i>Adult opportunities</i>    | 4.18        | 1.47       | 1-7              |
| <i>Adult meeting area</i>     | 4.18        | 1.37       | 1-7              |
| <i>Parent provisions</i>      | 4.84        | .98        | 3-7              |
| <b>Overall Mean</b>           | <b>4.60</b> | <b>.44</b> | <b>3.49-5.70</b> |

<sup>2</sup> Italicized items are those that were deleted from further analysis, including Exceptional Provisions (due to missing cases) and the Adult Needs subscale.

On 12 items, prekindergarten classrooms' average score was above 5, which means they exceeded the "good" standard. *Creative Supervision* and *Perceptual/Fine Motor* had the highest average scores, 5.68 and 5.67, respectively. In the average classroom, teachers supervised creative activities, such as art, music, dance, and dramatic play activities, standing near the children and ensuring the safety of children and the proper use of materials. Children had a variety of developmentally appropriate, perceptual and fine motor materials in good repair for their daily use. (Examples of perceptual and fine motor materials are puzzles, scissors, Lego's, and other small building toys.)

The following are other areas in which prekindergarten classrooms received high scores, along with a description of the average classroom:

- *Nap and Rest* (5.49) Nap was scheduled appropriately and napping children were supervised. The space used was conducive to resting (e.g., quiet, enough space, well ventilated).
- *Routine Furnishings* (5.38) Classroom had a sufficient number of child-sized tables, chairs, cubbies, and cots in good repair. In addition, the floors and walls were well maintained.
- *Music and Movement* (5.35) Classroom had musical instruments or a record, CD, or tape player. Several times weekly, children participated in music or movement activities.
- *Creative Schedule* (5.34) The daily schedule balanced structure and flexibility and included both indoor and outdoor activities.
- *Understanding Language* (5.31) Classroom had many language materials (e.g., books, records, language games, etc.) for both teacher-directed and child-initiated activities. In addition, the teacher planned a language activity daily, usually storytelling.
- *Using Language* (5.23) Children had many opportunities to use language during the day (e.g., playing with puppets, playing make-believe, answering teacher's questions, talking about experiences).
- *Gross Motor Supervision* (5.19) Teachers supervised children during gross motor activities, standing near the children and ensuring their safety.
- *Group Time* (5.18) Daily schedule included small group activities and free play. Large group activities were limited to short periods suited to age and abilities of children.
- *Relaxation Furnishings* (5.08) Classroom had a planned cozy area, (e.g., rug, upholstered furniture, rockers), usually for reading, regularly available to children.
- *Tone* (5.07) Classroom had a calm but busy atmosphere, where children and staff seemed happy and respected each other and adults hugged or warmly touched children.

Areas in which classrooms need the most improvement include: *Toileting*, *Dramatic Play*, *Cultural Awareness*, *Space to be Alone*, *Adult Personal Area*, *Exceptional Provisions*, and *Sand/Water Play*. For these seven items, the average classroom scored between a 3, which is "minimal," and 4, which is less than good (5). *Toileting* had the lowest average score, 3.03. In the average classroom, the restroom was either not clean or difficult to keep clean. In many cases, hot water, soap or paper towels, all of which are needed for proper handwashing, were not available.

The following are the areas in which prekindergarten classrooms received the lowest scores, along with a description of the average classroom (except *Adult Personal Area* and *Exceptional Provisions* since they were excluded from further analysis):

- *Dramatic Play* (3.49) Dramatic play props focused on housekeeping, with little or no props for other kinds of dramatic play. Space for dramatic play was usually available inside but not outside (i.e., there were no props for dramatic play outdoors).
- *Cultural Awareness* (3.63) Most classrooms had some ethnic or racial variety in toys and pictorial materials, but usually no evidence of non-sexist materials (such as pictorial materials representing males and females in non-traditional roles).
- *Space to be Alone* (3.69) While children had a space to be alone and were allowed to play alone, there was no space protected from intrusion by others (e.g., a “no interruption” rule or a small playhouse).
- *Sand/Water Play* (3.98) Many classrooms had a sand/water table but did not have toys to use with it, did not use it regularly, or never used water in it.

### ***Differences in Quality of Prekindergarten Classrooms***

While the overall quality of classrooms ranged greatly, the Council for School Performance wanted to see if there were significant differences in quality by region, organization type, and curriculum. Tables 5 - 7 show the differences of the mean ECERS score between groups.

**Table 5. Mean ECERS Scores by Region**

| <b>Region</b>         | <b>Mean ECERS Score</b> |
|-----------------------|-------------------------|
| North Georgia         | 4.63                    |
| Metro Atlanta         | 4.65                    |
| Southwestern Georgia  | 4.67                    |
| Southeastern Georgia  | 4.65                    |
| South Georgia         | 4.76                    |
| <b>All classrooms</b> | <b>4.66</b>             |

**Table 6. Mean ECERS Scores by Curriculum**

| <b>Curriculum</b>     | <b>Mean ECERS Score</b> |
|-----------------------|-------------------------|
| High/Scope            | 4.65                    |
| Creative              | 4.59                    |
| Montessori            | 4.74                    |
| Locally Developed     | 4.74                    |
| <b>All classrooms</b> | <b>4.66</b>             |

**Table 7. Mean ECERS Scores by Organization Type**

| <b>Auspice</b>          | <b>Mean ECERS Score</b> |
|-------------------------|-------------------------|
| Private, for-profit     | 4.64                    |
| Public                  | 4.66                    |
| Private, not-for-profit | 4.77                    |
| <b>All classrooms</b>   | <b>4.66</b>             |

While slight differences exist, there is not a significant difference in the quality of prekindergarten classrooms by region, curriculum, or organization type.

### ***Teacher Beliefs and Practices***

Both the classroom observations and the teacher surveys attempt to measure the developmental appropriateness of the early childhood program. A number of national and regional organizations, including the National Association for the Education of Young Children (NAEYC), International Reading Association, Southern Association on Children Under Six, have accepted a common definition of developmentally appropriate practice. Developmentally appropriate practices for early childhood programs are practices that are based on knowledge about how children learn and develop. Teachers must inform their practices with knowledge about the strengths, interests, and needs of each individual child in their group, and knowledge of the social and cultural contexts in which children live (Bredekamp and Copple, 1997).

The prekindergarten teachers in this study were given two surveys about their conception of early childhood education. These surveys provide information about the teachers' beliefs about teaching, and it is hoped that these beliefs will provide insight into the teachers' classroom practices.

To understand the guiding theory that determines teachers' decisions in planning, teaching, and assessing we need to understand what teachers believe to be important and what they believe to be not important. (Charlesworth et al., 1993, 256).

By comparing the classroom observations with the teachers' survey responses, the Council for School Performance can explore the relationship between teachers' beliefs and practice.

The Pre-K Survey of Beliefs and Practices (Marcon, 1994) was adapted from a scale that indicates the teachers' conception of early childhood education. The survey consists of 14 statements with a 10-point scale continuum of teachers' beliefs and practices. Of the 14 statements, seven refer to beliefs and seven refer to practices. "Teachers were first asked about their beliefs, and then about their actual classroom practices because local situations and policies often affect how individual beliefs are implemented" (Marcon, in press). Table 8 lists the average survey responses for each statement. Higher scores indicate a child-initiated teaching style and lower scores indicate an academically-directed teaching style.



**Table 8. Pre-K Survey of Beliefs and Practices of 1997-98 Prekindergarten Teachers**

| Statement  | Mean | Range  |
|--|------|--------|
| <b>1=academic preparation and 10=social and emotional growth</b>                     |      |        |
| I believe the most important developmental goal of pre-k is:                         | 6.95 | 1 - 10 |
| My pre-k classroom is most effective in fostering:                                   | 6.84 | 1 - 10 |
| <b>1=direct instruction and 10=active experience</b>                                 |      |        |
| I believe that pre-k children learn best through:                                    | 8.45 | 1 - 10 |
| Children in my pre-k classroom are learning predominately through:                   | 8.06 | 1 - 10 |
| <b>1=teacher initiated and 10=child initiated</b>                                    |      |        |
| I believe that activities in a pre-k classroom should be:                            | 6.59 | 1 - 10 |
| The activities in my pre-k classroom are typically:                                  | 6.46 | 3 - 10 |
| <b>1=dispense knowledge and 10=facilitate learning</b>                               |      |        |
| I believe that the role as a teacher of pre-k children is to:                        | 8.09 | 2 - 10 |
| In my present pre-k classroom, I am more likely to:                                  | 7.85 | 5 - 10 |
| <b>1=group oriented and 10=individualized one-to-one</b>                             |      |        |
| I believe that pre-k programs should use a learning format which is:                 | 6.51 | 2 - 10 |
| My pre-k classroom is typically:   | 6.01 | 2 - 10 |
| <b>1=adults and 10=peers</b>   |      |        |
| I believe that pre-k children in a group learn effectively through interaction with: | 7.15 | 1 - 10 |
| Most learning in my pre-k classroom takes place through interactions with:           | 7.03 | 3 - 10 |
| <b>1=distributed and 10=child accessible</b>   |      |        |
| I believe that class materials and resources for pre-k children should be:           | 9.01 | 5 - 10 |
| In my pre-k classroom, materials and resources are:                                  | 8.89 | 5 - 10 |

Marcon used the survey to identify three distinct teaching styles among the District of Columbia prekindergarten and Head Start teachers in her study: (1) academically-directed, (2) middle of the road, or (3) child-initiated. She described the three models of prekindergarten classrooms are as follows:

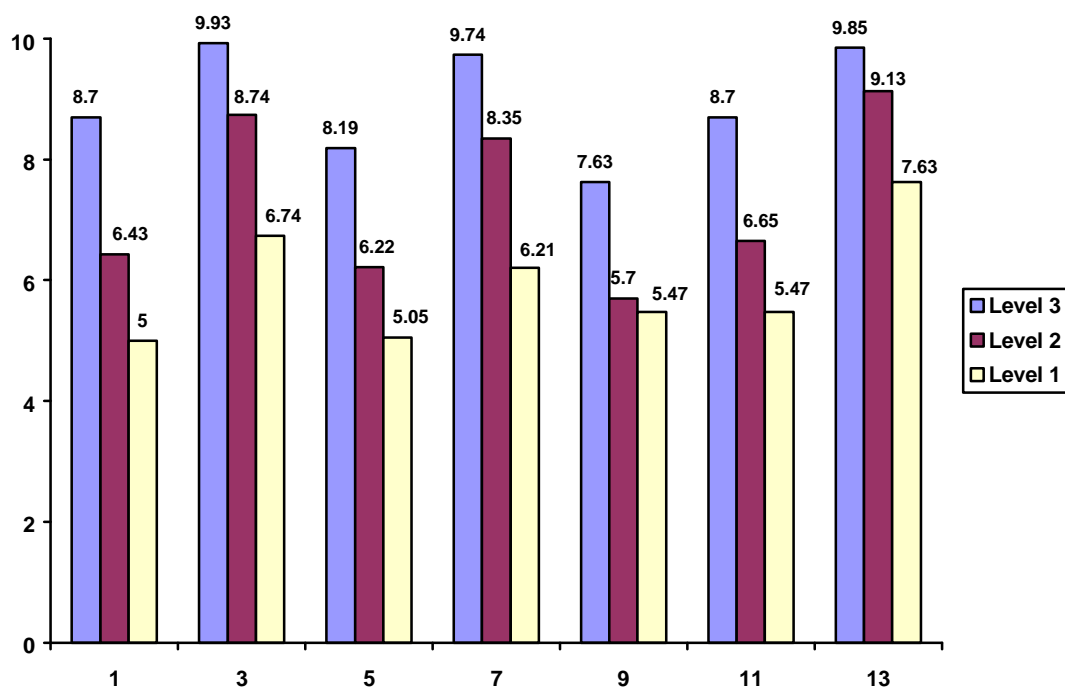
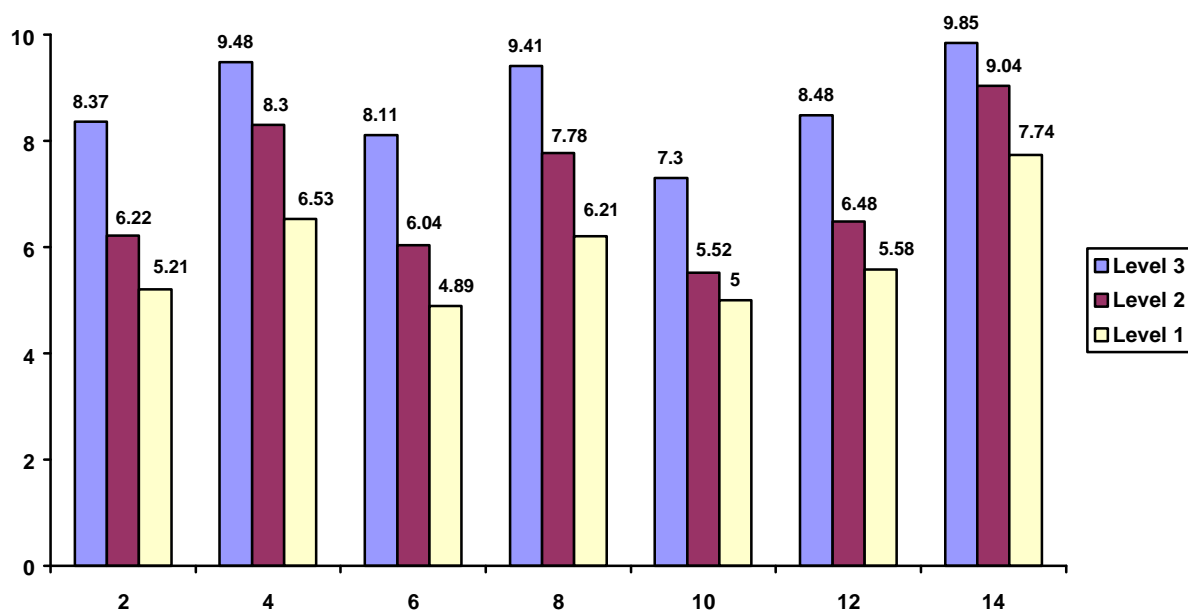
1. The Academically-Directed classroom is led by a "more academically directed [teacher who prefers] more direct instruction and teacher-directed learning experiences for preschoolers" (Marcon 1994, 9).
2. The Middle-of-the-Road classroom is characterized by an approach that falls between the other two models.
3. The Child-Initiated classroom is led by a "[child development-oriented teacher who facilitates] active learning by allowing children to select the focus of their learning" (Marcon 1994, 8).

Marcon found that attending a Child-Initiated classroom was correlated to greater skill mastery for children in those classrooms (Marcon 1990, 1992). The Middle of the Road classroom was detrimental to children, as children in this type of classroom were found to be "significantly lower in language, social, and motor development, as well as overall adaptive functioning and mastery of basic skills" (Marcon 1990, 1992).

Using the same method as Marcon, the Council for School Performance used a hierarchical cluster analysis to group the prekindergarten teachers in this study based on their survey responses. Cluster analysis is an exploratory statistical method that forms clusters based on similarity of responses. In this case, each cluster is a group of teachers whose survey responses were similar. Two variables were used in the cluster analysis, the sum of teachers' responses, where higher scores indicate a more child-initiated teaching style and lower scores indicate a more academically-directed teaching style, and the difference between teachers' beliefs and stated practices. The cluster analysis suggested that five distinct groups of teachers existed. Two of these clusters, each of which contained a very small number of teachers whose survey responses tended to be inconsistent, were not classifiable. The remaining three clusters each had a large numbers of teachers and were comprised of distinct groups of teachers, as indicated by their survey responses.

The three groups are referred to as Levels 1-3, where Level 3 teachers' survey responses tended to indicate a more child-initiated approach and Level 1 teachers' responses tended to indicate a more academically-directed approach. Each group has approximately an equal number of teachers. Figures 4 shows the mean responses for each belief statement on the survey for teachers in the 1997-98 school year. Figure 5 shows the mean responses for each practice statement on the survey for teachers in the 1997-98 school year. These graphs illustrate the differences in responses for the three groups of teachers. For all survey questions, Level 3 teachers' responses indicate a more child-initiated approach, and Level 1 teachers' responses indicate a more academically-directed approach. Level 2 teachers' responses fall in between these two approaches. In both school years, the average sum of all responses (includes beliefs and practices statements) on the surveys was 104 out of a possible 140.

However, since the Council for School Performance did not collect data about prekindergarten participants, the impact of the different teaching styles cannot be assessed in this study. The validity of this survey will be possible and is within the purpose of the Applied Research Center's prekindergarten longitudinal study.

**Figure 4. Beliefs of Prekindergarten Teachers, 1997-98 School Year****Figure 5. Practices of Prekindergarten Teachers, 1997-98 School Year**

In the 1997-98 school year, teachers also completed a Developmentally Appropriate Practices survey (Peisner-Feinberg, 1993), which measures teachers' beliefs regarding developmentally appropriate practices. On a five-point scale, with 1 being least appropriate and 5 being the most developmentally appropriate, prekindergarten teachers rated their level of agreement with 31 statements about early childhood education. Some statements describe inappropriate practices for prekindergarten. These statements were reversed in their scoring, so that "strongly disagree" was a 5 and "strongly agree" was a 1. Each teacher's responses were averaged to create a Teacher Developmental Appropriateness score.

Most Pre-K teachers know what is developmentally appropriate for prekindergartners. Results from the Developmentally Appropriate Practices survey indicate that teachers understand developmentally appropriate practice. The mean Teacher Developmental Appropriateness score for prekindergarten teachers in this study was 3.96, with a range of 3.10 to 4.84. An earlier version of this survey with slightly fewer questions has been used in other studies with other groups, including Head Start teachers, kindergarten teachers and elementary school principals. In the Head Start study, the 32 teachers' mean score was 3.7 (Bryant, et al., 1994), which is lower than the prekindergarten teachers' mean score (3.95) for the same version of the survey. In the other study that used this measure, researchers administered the survey to 93 kindergarten teachers and 93 elementary school principals in North Carolina (Bryant, Clifford, and Peisner, 1991). Both teachers and principals in the earlier study had higher average scores, 4.13 and 4.05, respectively, than did the prekindergarten teachers in this study.

Table 9 lists statements included in this survey and the mean score of teachers, ordered by the teachers' mean scores. Statements in italics are those that describe inappropriate practices and that have been reversed in their scoring. For all statements, higher mean scores indicate developmentally appropriate practice and lower scores indicate inappropriate practice.

**Table 9. Teachers' Mean Scores on the Developmentally Appropriate Practices Survey**

| <b>Prekindergarten teachers should:</b>   | <b>Mean</b> |
|---|-------------|
| Read stories to the class every day   | 4.81        |
| Provide children with a lot of open-ended materials and experiences                       | 4.70        |
| Use manipulative materials to teach children pre-math skills                              | 4.67        |
| <i>Not let children solve problems on their own</i>                                       | 4.65        |
| Encourage dramatic play as a way to develop cognitive and social skills                   | 4.64        |
| Allow children to play with blocks  | 4.59        |
| Present educational activities as games   | 4.56        |
| Expose children to the language and values of other cultures                              | 4.45        |
| Have a daily music activity   | 4.45        |
| <i>Show more interest in how children work and play than in what they produce</i>         | 4.34        |
| <i>Not use too many different materials requiring fine motor skills</i>                   | 4.30        |
| Plan time for gross motor activities every morning and afternoon                          | 4.30        |
| Promote the language and values of children's own culture                                 | 4.29        |
| Devote at least half of each day to child-chosen activities                               | 4.20        |
| Plan time for sand and water play   | 4.06        |
| Allow children to be alone when they want   | 4.04        |
| Use centers as the main method for teaching   | 4.02        |
| Provide major parts of each day for free play   | 3.85        |
| <i>Use competition to motivate children during games and activities</i>                   | 3.76        |
| <i>Provide workbook and other seatwork activity</i>                                       | 3.74        |
| <i>Have children spend most of the day in large group activities with the whole class</i> | 3.74        |
| Assume that children are motivated to learn without concrete rewards                      | 3.61        |
| <i>Use worksheets to help children learn skills such as pre-math and pre-reading</i>      | 3.55        |
| Involve parents in decision about the daily program                                       | 3.50        |
| <i>Require all children to take part in every activity</i>                                | 3.47        |
| <i>Give readiness tests to all children early in the year</i>                             | 3.31        |
| <i>Require all children to complete all tasks and activities</i>                          | 3.29        |
| <i>Use privileges, prizes and other rewards to motivate children</i>                      | 3.06        |
| <i>Have formal instruction in pre-reading skills for all children</i>                     | 3.05        |
| <i>Use things like charts or contracts to motivate children</i>                           | 2.96        |
| <i>Teach children to be quiet in the classroom</i>  | 2.75        |

At least 98% of prekindergarten teachers in this study believed that prekindergarten teachers should provide many open-ended experiences for children, use manipulative materials to teach math, allow children to play with blocks, let children solve problems on their own, and read stories to the class every day. Most teachers also believed that prekindergarten teachers should expose children to the language and values of other cultures, have a daily music activity, and present educational activities as games.

The Council for School Performance also compared the two survey results for the 1997-98 prekindergarten teachers. The two teacher surveys were found to be significantly correlated ( $r=.47$ ,  $p<.000$ ), that is, teachers with high Developmental Appropriateness Scores tended to have more child-initiated beliefs and stated practices. On average, Level 3 teachers (as determined by the Marcon survey) had higher Developmental Appropriateness Scores on the other survey. Level 2 teachers had, on average, lower Developmental Appropriateness Scores.

The mean Developmental Appropriateness score for Level 1 teachers was the lowest. The mean Developmental Appropriateness score for Level 3 teachers was 4.13; for Level 2 teachers, 4.02; and for Level 1 teachers, 3.70, which are statistically significant differences.

The results from the two surveys differed in their relationship to classroom quality. In the 1997-98 school year, there were not significant differences in the classroom quality, as measured by the ECERS, for these three groups of teachers (Levels 1, 2, and 3). The mean ECERS scores for Level 3 teachers was 4.59; for Level 2 teachers was 4.69; and for Level 1 teachers, 4.40. However, these differences were not found to be statistically significant. On the Developmentally Appropriate Practices survey (Peisner-Feinberg, 1993), teachers' Developmental Appropriateness scores showed significant, though modest, correlation to the ECERS mean scores ( $r=.26$ ,  $p<.022$ ). That is, teachers who knew more about developmentally appropriate practice, as measured by the survey, tended to have higher quality classrooms, as measured by the ECERS. These results are similar to those obtained in an earlier study of kindergarten teachers, which found that the level of teachers' knowledge of developmentally appropriate practice was positively related to the degree to which the teachers implemented appropriate practice in their classrooms (Bryant et al., 1991).

### ***Profile of Prekindergarten Teachers***

#### ***Race and Sex***

Of the 1997-98 prekindergarten teachers who completed the survey, most were white (73%) and female (99%). In the 1996-97 school year, 67% were white and 97% were female. Nationwide figures show similar demographics for prekindergarten teachers – 98.1% female, according to 1996 U. S. Department of Labor statistics. Table 10 shows the race of the samples of prekindergarten teachers from both school years.

**Table 10. Race of Prekindergarten Teachers in Sample, 1996-97 and 1997-98 School Years**

|                  | <b>1996-97 (n=189)</b> | <b>1997-98 (n=80)</b> |
|------------------|------------------------|-----------------------|
| White            | 67%                    | 73%                   |
| African-American | 28%                    | 24%                   |
| Hispanic         | 2%                     | 3%                    |
| Multi-racial     | 3%                     | 1%                    |

(Note: Totals may be over 100% due to rounding.)

#### ***Education, Credentials and Training***

In the 1997-98 school year, 84% of prekindergarten teachers had at least a four-year college degree. When asked about their highest level of education, nearly half (48%) said they had earned a bachelor's degree, 20% had taken some graduate level classes, and nearly 16% had earned a graduate degree. Three percent had only a high school diploma, and 14% had taken some college courses, but did not have a four-year degree. However, teachers' education level was not found to be significantly correlated to classroom quality, as measured by the Early Childhood Environment Rating Scale, or to teachers' beliefs, as measured by the surveys.

Of those with at least a college degree, 63% had earned their degree in early childhood education. About one-fifth (18%) earned their degree in education (other than early childhood education). Six percent earned their degree in child development, special education, or psychology. Eight percent earned their degree in a non-education or child development-related field, and 6% did not respond to this question.

Teachers during the 1996-97 school year had very similar education attainment levels as did those of the 1997-98 school year. Most (85%) of prekindergarten teachers had at least a four-year college degree. When asked about their highest level of education, most (59%) said they had earned a bachelor's degree, 15% had taken some graduate level classes, and 11% had earned a graduate degree. Five percent had only a high school diploma, and 10% had taken some college courses, but did not have a four-year degree. Program of study information was not collected from the 1996-97 teachers.

According to Office of School Readiness data, 72% of the 1997-98 teachers in the study had teacher certifications. Nine percent had been trained as a Montessori teacher or had received a vocational diploma in child care. Seven percent had earned a Child Development Associate or Child Care Professional certification. The percentages in the latter two categories could be higher, as OSR collects information on the highest education attainment level.

Most (83%) teachers said they had completed the necessary training on the curriculum used in their classroom. Sixty percent had participated in the Best Practices training provided by the Office of School Readiness.

### ***Staff Turnover***

Only 55% of the classrooms had the same prekindergarten teachers as last year, indicating a high turnover rate – 45% – among prekindergarten teachers. National studies have found similarly high turnover rates among child care teaching staff. The 1997 National Child Care Staffing Study found that more than a quarter (27%) of child care teachers left their jobs during the past year (Whitebook, Howes, and Phillips, 1998). A follow-up study of the 1988 staffing study found that from that only 30% of teachers remained at the same center four years later (Whitebook, Phillips, and Howes, 1993). However, different methods of measuring turnover rates make comparisons with other studies difficult.

Finding and keeping quality teachers is a significant problem facing child care. The 1992 National Child Care Staffing Study found that “[t]urnover of teacher staff continues to be high, threatening the ability of centers to offer consistent services to children” (Whitebook et al., 1998). While many studies have reported high turnover rates, one literature review found that only some report a correlation between staff turnover– also referred to as caregiver stability – and child outcomes (for a review of the literature, see Phillips, 1987). More recent studies have found that a higher rate of teacher turnover is associated with less positive behavior of both teachers and children in their classrooms (e.g., Howes and Stewart, 1987; Whitebook, Howes, and Phillips, 1989). A national child care study found that the quality of the classroom environment in child care centers with less turnover was higher than in centers with more turnover (Helburn, 1995, 100).

In this study, the average prekindergarten teacher has worked for about three years at her present place of employment. However, many (38%) of teachers had been at the facility for less than a year. One-fifth had been there for more than one year but less than two years. Another one-fifth had been there between two to three years.

***Teacher Turnover and Organizational Climate***

In the 1996-97 school year, researchers asked teachers to answer a set of eight questions about the social climate at their sites. These questions were designed to determine the extent to which tension exists between staff (as perceived by the teacher) and the degree of job satisfaction felt by the teacher. Most teachers felt that they were working in a supportive environment and did not feel tension between staff. These findings cast doubt that these working conditions are responsible for the staff turnover, especially since 45% of the classrooms in the 1997-98 sample had a different teacher than in the previous year.

One of the social climate questions showed more variation in response than did the other questions and indicated an overall lower level of satisfaction. Thirty-six percent of teachers thought that Pre-K teachers' salaries at their site were unfair. A previous study found that "the most important determinant of staff turnover, among the adult work environment variables, was staff wages" (Whitebook et al. 1989, 4). This study produced similar results. In the 1996-97 school year, we asked teachers if they thought their salaries were unfair. Then we looked at which teachers remained in the 1997-98 school year. Teachers who remained in their jobs were more likely to have felt that their salaries were fair (85%) than were those that left (49%).

Teachers of prekindergarten classes run by local school systems were more likely to stay in their positions from the 1996-97 to 1997-98 school years, than were teachers in prekindergarten classes not run by school systems. Seventy-one percent of the local school system prekindergarten teachers remained, versus only 43% of teachers at prekindergarten programs not run by local school systems. The teachers at local school systems were much less likely to feel that they were paid unfair salaries than were teachers not working for local school systems. Over half (51%) of teachers not working for local school systems felt that their salaries were unfair, versus only 7% of the school system teachers. The Council for School Performance did not collect information on actual teacher salaries so it can not determine whether teachers in school systems are actually being paid more or whether merely their perceptions are different.

***Profile of Prekindergarten Classrooms (1997-98 School Year)***

In the sample of classrooms chosen for the study, nearly half (48%) were run by private, for-profit organizations. Forty-three percent were run by public, not-for-profit agencies, most (98%) of which were school systems. The remaining 9% were operated by private, non-profit organizations, such as churches, community organizations, or non-profit child care centers.

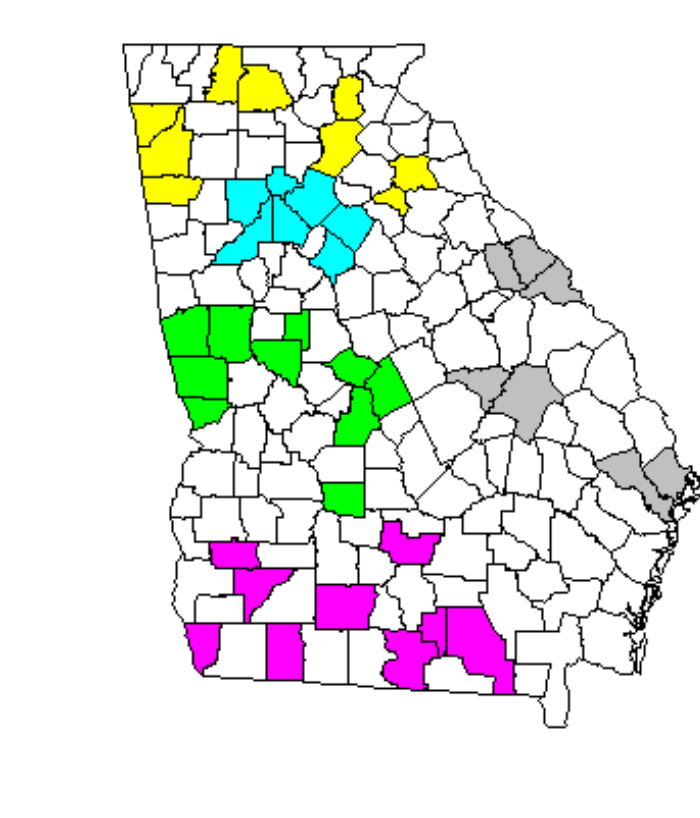
Most classrooms (64%) in the sample use the High/Scope curriculum, which is followed in popularity by locally developed curriculum, used by 17% of classrooms. A locally developed curriculum is a proprietary curriculum developed usually by a corporate child care chain, such as KinderCare. Creative curriculum is used by 13% of classrooms and the remaining 6% use a Montessori curriculum.

Most of the prekindergarten classrooms (32%) in the sample could be classified as being located in a rural areas or small towns. Twenty-three percent were located in highly-populated suburbs, and 21% were in large cities. Fourteen percent were located in a small city, and the remaining 11% were in large towns or lightly-populated suburbs. (Information about how prekindergarten classrooms were classified is included in the appendix.)



Figure 6 shows where the classrooms from the 1997-98 sample were located.

**Figure 6. Prekindergarten Classrooms in Sample by Region**



### ***Survey Respondents Compared to Prekindergarten Classroom Sample***

Eighty percent of teachers from the classrooms in our sample responded to the survey sent to them during the 1997-98 school year. No systematic differences appear to exist between those that returned the survey and those that did not. Tables 11 – 13 compare the survey respondents with the sample by region, curriculum, and organization type.

**Table 11. Region of Survey Respondents and the 1997-98 Sample**

| <b>Region</b>        | <b>Survey Respondents</b> | <b>1997-98 Sample</b> |
|----------------------|---------------------------|-----------------------|
| North Georgia        | 15%                       | 14%                   |
| Metro Atlanta        | 43%                       | 45%                   |
| Southwestern Georgia | 13%                       | 15%                   |
| Southeastern Georgia | 16%                       | 15%                   |
| South Georgia        | 13%                       | 11%                   |

**Table 12. Curriculum Used by Survey Respondents and the 1997-98 Sample**

| <b>Curriculum</b> | <b>Survey Respondents</b> | <b>1997-98 Sample</b> |
|-------------------|---------------------------|-----------------------|
| High/Scope        | 64%                       | 64%                   |
| Creative          | 19%                       | 13%                   |
| Montessori        | 5%                        | 6%                    |
| Bank Street       | 0%                        | 0%                    |
| Locally Developed | 13%                       | 17%                   |

**Table 13. Organization Type of Survey Respondents and the 1997-98 Sample**

| <b>Auspice</b>          | <b>Survey Respondents</b> | <b>1997-98 Sample</b> |
|-------------------------|---------------------------|-----------------------|
| Private, for-profit     | 50%                       | 48%                   |
| Public, not-for-profit  | 43%                       | 43%                   |
| Private, not-for-profit | 8%                        | 9%                    |

Furthermore, while the mean ECERS score for survey respondents' classrooms (4.69) was slightly higher than that of non-respondents' classrooms (4.55), the difference is not statistically significant. Therefore, there does not seem to be a difference between the quality of the classrooms of those teachers who completed the survey and those who did not.

## **Appendix**

### ***Methodology***

#### ***Sample***

The Applied Research Center began a longitudinal study of children in the Georgia Prekindergarten Program in the 1996-97 school year. For this study, multiple sources of data about 211 classrooms were collected, including surveys of teachers and directors/principals, classroom observations, parent ratings of children and many other sources of data. The present study provides a follow-up of approximately half (105) of these classrooms.

The original sample was randomly selected from a total of 3,037 prekindergarten classes across the state of Georgia, resulting in the selection of 220 classrooms. First, the prekindergarten classrooms were divided on three variables: region, organization type, and curriculum. The state was divided into five regions using population as the key demographic: (1) North Georgia, (2) Metro Atlanta, (3) Southwest Georgia, (4) Southeast Georgia, and (5) South Georgia. Organizations were divided into two types: (1) public school systems or (2) other. The Georgia Prekindergarten Program has five approved curricula: (1) Creative, (2) High/Scope, (3) Montessori, (4) Bank Street, and (5) a locally developed curriculum. A sixth category (other) represented those classrooms where curriculum type was not initially known. (The original data did not include any classrooms that had selected the Bank Street curriculum. The High Reach Framework was added as an approved curriculum after the 1997-98 school year.) Based on the distribution of classrooms in the state, 220 classes were randomly selected (see table 1A).

Table 1A. Population and Sample Information Pre-K Sample, 1996-97 School Year

## Public School System

| Region | Creative | High Scope | Montessori | Locally Developed | No Info.   | Total Public |
|--------|----------|------------|------------|-------------------|------------|--------------|
| 1      | 0<br>0   | 6<br>2     | 0<br>0     | 0<br>0            | 150<br>9   | 156<br>11    |
| 2      | 2<br>2   | 16<br>2    | 0<br>0     | 0<br>0            | 327<br>20  | 345<br>24    |
| 3      | 0<br>0   | 18<br>2    | 0<br>0     | 0<br>0            | 264<br>16  | 282<br>18    |
| 4      | 0<br>0   | 4<br>2     | 0<br>0     | 0<br>0            | 279<br>17  | 283<br>19    |
| 5      | 0<br>0   | 46<br>2    | 0<br>0     | 0<br>0            | 198<br>12  | 244<br>14    |
| Total  | 2<br>2   | 90<br>10   | 0<br>0     | 0<br>0            | 1218<br>74 | 1310<br>86   |

## Private Schools

| Region | Creative  | High Scope | Montessori | Locally Developed | No Info.  | Total Private |
|--------|-----------|------------|------------|-------------------|-----------|---------------|
| 1      | 9<br>2    | 32<br>2    | 1<br>1     | 5<br>5            | 97<br>6   | 144<br>16     |
| 2      | 122<br>10 | 233<br>12  | 15<br>6    | 126<br>15         | 653<br>41 | 1149<br>84    |
| 3      | 2<br>2    | 104<br>6   | 1<br>1     | 0<br>0            | 60<br>4   | 167<br>13     |
| 4      | 12<br>2   | 67<br>4    | 5<br>2     | 0<br>0            | 94<br>6   | 178<br>14     |
| 5      | 6<br>2    | 40<br>2    | 0<br>0     | 0<br>0            | 43<br>3   | 89<br>7       |
| Total  | 151<br>18 | 476<br>26  | 22<br>10   | 131<br>20         | 947<br>60 | 1727<br>134   |

## Public and Private

| Region | Total       |
|--------|-------------|
| 1      | 300<br>27   |
| 2      | 1494<br>108 |
| 3      | 449<br>31   |
| 4      | 461<br>33   |
| 5      | 333<br>21   |
| Total  | 3037<br>220 |

## Legend

N = population size  
n = sample size for each cell

The sample for the 1997-98 school year was a randomly selected sub-sample of the classrooms that participated in the 1996-97 study. Maintaining the same proportions of the 1996-97 sample in terms of region, organization type, and curriculum, we randomly selected half of each possible combination. Table 2A illustrates the distribution of classrooms for each program year's sample.

Of the 105 classrooms selected from last year's sample of 211, four classrooms no longer existed. Two of the programs closed, one of the programs still had Pre-K but had fewer classrooms than last year, and one of the programs still existed but did not offer Pre-K anymore. Researchers were unable to schedule a site visit to one additional classroom. Therefore, 100 classrooms were included in this study.

Table 2A. Population and Sample Information Pre-K Sample, 1997-98 School Year

## Public School System

| Region | Creative | High Scope | Montessori | Locally Developed | Total Public |
|--------|----------|------------|------------|-------------------|--------------|
| 1      | 2<br>1   | 9<br>4     | 0<br>0     | 0<br>0            | 11<br>5      |
| 2      | 3<br>2   | 21<br>10   | 0<br>0     | 0<br>0            | 24<br>12     |
| 3      | 0<br>0   | 16<br>8    | 0<br>0     | 2<br>1            | 18<br>9      |
| 4      | 0<br>0   | 17<br>8    | 1<br>1     | 0<br>0            | 18<br>9      |
| 5      | 0<br>0   | 12<br>6    | 0<br>0     | 1<br>1            | 13<br>7      |
| Total  | 5<br>3   | 75<br>36   | 1<br>1     | 3<br>2            | 84<br>42     |

## Private Schools

| Region | Creative | High Scope | Montessori | Locally Developed | Total Private |
|--------|----------|------------|------------|-------------------|---------------|
| 1      | 2<br>1   | 9<br>5     | 1<br>1     | 4<br>2            | 16<br>9       |
| 2      | 13<br>6  | 36<br>18   | 4<br>2     | 26<br>12          | 79<br>38      |
| 3      | 2<br>1   | 7<br>3     | 1<br>1     | 2<br>1            | 12<br>6       |
| 4      | 2<br>1   | 9<br>4     | 2<br>1     | 0<br>0            | 13<br>6       |
| 5      | 1<br>1   | 6<br>3     | 0<br>0     | 0<br>0            | 7<br>4        |
| Total  | 20<br>10 | 67<br>33   | 8<br>5     | 32<br>15          | 127<br>63     |

## Public and Private

| Region | Total      |
|--------|------------|
| 1      | 27<br>14   |
| 2      | 103<br>50  |
| 3      | 30<br>15   |
| 4      | 31<br>15   |
| 5      | 20<br>11   |
| Total  | 211<br>105 |

## Legend

N = 1996-97 sample

n = sample size for each cell

**Data Collection***Data Collection for 1997-1998 School Year*

Effort was given to ensuring acceptable interrater reliability in the use of the observation instruments, the Early Childhood Environment Rating Scale (ECERS) (Harms and Clifford, 1980) and the Observation Checklist. Prior to the data collection, each researcher participated in a three and one-half day training on the research protocol, developmentally appropriate practice, and the use of the observation instruments. Then, each researcher went on site visits with the project manager until an acceptable level of reliability was achieved. About mid-point in the data collection process, researchers were paired to conduct a site visit to assure continued interrater reliability on the study's instruments. Regular meetings were conducted to clarify any ambiguities in the use of the instruments. Scores for both instruments were obtained mainly through observation; however, lead teachers were interviewed to obtain information about items that could not be readily observed.

The ECERS is a well-established observation instrument used to assess global quality of early childhood classrooms of children ranging from two to six years of age. "Environment, as defined in this scale, includes: use of space, materials and experiences to enhance children's development, daily schedule, and supervision provided" (Harms and Clifford, 1980). The scale is divided into seven subscales: Personal Care Routines of Children, Furnishings and Display for Children, Language-Reasoning Experiences, Fine and Gross Motor Activities, Creative Activities, Social Development, and Adult Needs. Higher scores on the instrument have been shown to be associated with better child outcomes (e.g., Whitebook et al., 1989; Cost, Quality & Child Outcomes Team, 1995).

The Observation Checklist provides an inventory of experiences available to children in an early childhood care setting. It is a largely dichotomous instrument that looks at classroom layout, including centers, facilities, equipment, and the outdoor play area.

The assessment of teachers' beliefs and practices included the administration of two written surveys. Teacher Beliefs and Practices (Peisner-Feinberg, 1993) is an instrument that contains 31 statements concerning developmentally appropriate practice. Each statement is rated on a five-point scale in terms of their agreement, with 1 being "strongly disagree" and 5 being "strongly agree." The Pre-K Survey of Beliefs and Practices (Marcon, 1994) was adapted from a scale that indicates the teachers' conception of early childhood education, which was created to "clarify the differential impact of preschool models on long-term school success of inner city public school children" (Marcon, 1994). The survey consists of 14 statements with a 10-point scale continuum of teachers' beliefs and practices. It identifies whether a teacher's classroom is (1) child-initiated, (2) academically-directed, or (3) middle of the road, somewhere between being mostly child-initiated or academically-directed.

The teacher surveys and self-addressed, stamped envelopes were mailed to all teachers on May 4. Within two weeks, the researchers attempted to make follow-up calls to each teacher, asking her or him to complete the survey as soon as possible. Any that did not receive the survey were mailed another copy. By June 15, 80% had completed and returned the survey.

Several assurances were made to prevent inaccurate data entry. Data validations were programmed into the software program in which data were entered. Then, all data were subject to a random 30% data entry check.

The Office of School Readiness provided a database of information about each teacher in the study. This information included teacher credential information and organization type.

#### *Data Collection for the 1996-1997 School Year*

Observations were completed on all classes in the original sample from February to March 1997. Each visit was conducted by one of a team of seven researchers. Researchers completed the Observation Checklist during a 45-minute to two-hour period.

Teachers were interviewed by telephone once at mid-year and again at the end of the school year. Teachers were also interviewed face to face during site visits. The first telephone interview occurred during January and February 1997 using the Computer Assisted Telephone Interviewing (CATI) system at the Applied Research Center. Of the 220 teachers, we completed surveys with 189 teachers, which is a response rate of 90%. The second telephone survey of teachers was conducted during May and June of 1997, using the CATI system. Again, we attempted to complete surveys with the original sample of 220 teachers. A total of 205 telephone surveys were completed, resulting in a response rate of 93%. On-site interviews were conducted with all of the 211 teachers in our final sample. In addition to other survey questions about the classroom climate, discipline, and other subjects, the teachers were administered the Pre-K Survey of Beliefs and Practices (Marcon, 1994).

Information about the teachers' credentials and education, curriculum, and organization type was obtained from the Office of School Readiness.

#### ***Urban/Rural Designation***

Prekindergarten classrooms were classified into one of five designations based on the population, town or city size, and population density of the county where they are located. Large cities have a county population greater than 450,000 and a density over 2,000. Highly-populated suburbs also have a county population greater than 450,000, but a density less than 2,000. Small cities have a county population between 150,000 and 450,000, a city population less than 100,000, and a density greater than 400. Large towns and lightly-populated suburbs have a county population between 80,000 and 120,000, a minimum city population of 30,000, and a population density of greater than 100. Rural areas and small towns have a county population less than 80,000, a city population less than 30,000, and a maximum density of 200.

#### ***Data Analysis***

Data in this report are unweighted. Weighted results were examined, but little difference in the weighted and unweighted results led us to use unweighted results for the sake of simplicity. All significant results in this report are at the 95 percent or higher confidence level.



## References

- Basile, K. C., Henderson, L. W., and Henry, G. T. (1997). Prekindergarten longitudinal study, 1996-1997 school year, report 1: Program implementation characteristics. Atlanta: Applied Research Center.
- Basile, K. C. and Henry, G. T. (1996). Quality and effectiveness of pre-kindergarten programs in Georgia: Parental perspectives. Atlanta: Council for School Performance, Georgia State University.
- Bredekamp, S. and Copple, C., Eds. (1997). Developmentally appropriate practice in early childhood programs. Washington, D. C.: National Association for the Education of Young Children.
- Bryant, D. M., Clifford, R. M., and Peisner, E. (1989). Best practices for beginners: Quality programs for kindergarteners. Chapel Hill: Frank Porter Graham Child Development Center, University of North Carolina at Chapel Hill.
- Bryant, D. M., Clifford, R. M., and Peisner, E. S. (1991). Best practices for beginners: Developmental appropriateness in kindergarten. American Educational Research Journal, 28, 783-803.
- Bryant, D. M., Burchinal, M., Lau, L. B., and Sparling, J. J. (1994). Family and classroom correlates of Head Start children's developmental outcomes. Early Childhood Research Quarterly, 9, 289-309.
- Byron, K. and Henry, G. T. (1998). Report on the expenditure of lottery funds, fiscal year 1997. Atlanta: Council for School Performance, Georgia State University.
- Charlesworth, R., Hart, C. H., Burts, D. C., Mosley, J., and Fleege, P. O. (1993). Measuring the developmental appropriateness of kindergarten teachers' beliefs and practices. Early Childhood Research Quarterly, 8, 255-276.
- Cost, Quality & Child Outcomes Team (1995). Cost, quality, and child outcomes in child care centers, public report, second edition. Denver: Economics Department, University of Colorado at Denver.
- Harms, T. and Clifford, D. (1980). Early childhood environment rating scale. New York: Teachers College Press.
- Helburn, S. W., (Ed.). (1995). Cost, quality and child outcomes in child care centers, technical report. Denver: Department of Economics, Center for Research in Economic and Social Policy:

- Howes, C. and Stewart, P. (1987). Child's play with adults, toys and peers: An examination of family and child care influences. Developmental Psychology, 23, 423- 430.
- Howes, C. and Smith, E. W. (1995). Relations among child care quality, teacher behavior, children's play activities, emotional security, and cognitive activity in child care. Early Childhood Research Quarterly, 10, 381-404.
- Marcon, R. A. (1990). Early learning and early identification: Final report of the three year longitudinal study. Washington, D. C.: District of Columbia Public Schools.
- Marcon, R. A. (1992). Differential effects of three preschool models on inner-city 4-year-olds. Early Childhood Research Quarterly, 7, 517-530.
- Marcon, R. A. (1994). Doing the right thing for children in a major urban school system. Young Children, 50, 8-20.
- Marcon, R. A. (in press). Preschool models. Developmental Psychology.
- Peisner-Feinberg, E. S. (1993). Developmentally appropriate practices beliefs scale. Unpublished rating scale.
- Phillips, D. A. (Ed.). (1987) Quality in child care: What does the research tells us? Washington, D. C.: National Association for the Education of Young Children.
- Phillips, D. A. and Howes, C. (1987). Indicators of quality in child care: Review of research. In D. A. Phillips (Ed.), Quality of child care: What does the research tell us? (p. 1-19). Washington, D. C.: National Association for the Education of Young Children.
- Pilcher, L. and Kaufman-McMurrain, M. (1996). The longitudinal study of Georgia's prekindergarten children and families. Atlanta: Department of Early Childhood Education, Georgia State University.
- Scarr, S., Eisenberg, M., and Deater-Deckard, K. (1994). Measurement of quality in child care centers. Early Childhood Research Quarterly, 9, 131-151.
- U. S. Department of Labor. (1997). Facts on working women, Washington, D. C.: U. S. Department of Labor, Women's Bureau.
- Whitebook, M., Howes, C., and Phillips, D. (1989). Who cares? Child care teachers and the quality of care in America. Oakland, CA: Child Care Employee Project.
- Whitebook, M., Phillips, D., and Howes, C. (1993). National child care staffing study revisited: Four years in the life of center-based child care. California: Child Care Employee Project.

- Whitebook, M., Howes, C., and Phillips, D. (1998). Worthy work, unlivable wages: The national child care staffing study, 1988-1997. Washington, D. C.: Center for the Child Care Workforce.
- Willer, B., Hofferth, S., Kisker, E., Divine-Hawkins, P., Farqhar, and Glantz, E. (1991). The demand and supply of child care in 1990. Washington, DC: National Association for the Education of Young Children.